



### DESCRIPTION

One of the biggest problems cities currently face is air pollution. According to data provided by the WHO, 9 out of every 10 people in the world breathe polluted air, causing the premature death of more than 7 million people. Furthermore, 9 of Latin America's 10 most polluted cities are in Chile. Photio, a technology developed by Fractal SpA, seeks to contribute to the solution of this complex problem by turning surfaces -such as walls of houses and buildings- into environmental decontaminants. Photio technology is a nanotechnological additive for paints (in liquid form) that aids in the degradation of several environmental pollutants through a photochemical process triggered by natural or artificial UV radiation.

### TECHNOLOGY: TRL 8

Photio technology is at TRL 8. Its performance has been experimentally validated in a laboratory and is currently at the industrial pilot stage. Work is underway to certify its efficiency through pollutant removal tests in photo-reactors.

### MARKET

Market Size: USD 205.6 billion (2018).

CAGR: 4.5%.

Segment: Architectural Coatings

Expected Market Size: USD 267.7 billion (2026).

The global paints and coatings market is on the rise, especially waterborne coatings and Volatile Organic Compound (VOC)-free powders, due to increasing regulations around VOCs and other pollutants, as well as increased awareness of the adverse effects of solvent-based paints and coatings.

The global market demands more efficient, environmentally friendly paints and coatings.

### COMPETITIVE ADVANTAGES

**Effectiveness:** Capable of degrading greenhouse gases (GHG) and local emissions in short reaction times. One square meter painted with Photio is equivalent to the decontamination of 3-4 trees through photosynthesis.

**Aesthetics and Drying:** It does not alter the physical properties of the paints to which it is added.

**Anticorrosive:** Photio has also proven to have anticorrosive and self-cleaning properties.

**Operational Cost Improvement:** Reduces expenses related to environmental compliance.

### PROTECTION

Fractal SpA is currently drafting an invention patent application.



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*Additive designed to make paints and coatings act as environmental decontaminants*

### TEAM



**Matías Moya**  
•General Manager



**Jaime Rovigno**  
•Operation Manager

### CONTACT

**Javier Ramírez | CEO**

[javier.ramirez@knowhub.cl](mailto:javier.ramirez@knowhub.cl)

[www.knowhub.cl](http://www.knowhub.cl)

**Matías Moya | General Manager**

[matias.moya@ug.uchile.cl](mailto:matias.moya@ug.uchile.cl) | +56 9 7663 1959

[https://photio.cl/](http://https://photio.cl/)